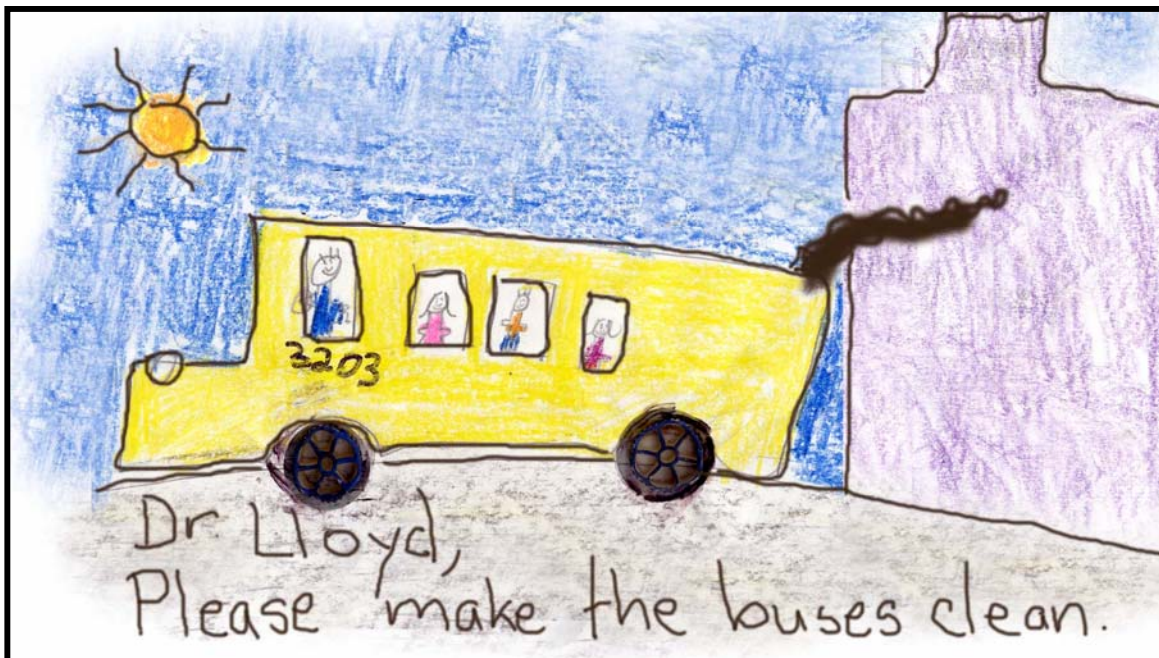


**State of California  
California Environmental Protection Agency  
AIR RESOURCES BOARD**

**DRAFT REVISION 2003**

**LOWER-EMISSION SCHOOL BUS PROGRAM**



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## PROGRAM CONTACTS

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The California Energy Commission (CEC) contacts for the Lower-Emission School Bus Program are Sandra Fromm and Mike Trujillo. School districts in all areas of the state, except those located in the Bay Area Air Quality Management District, the South Coast Air Quality Management District, and the Sacramento Metropolitan Air Quality Management District, should direct program inquiries to the CEC at:

California Energy Commission  
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MS 41  
Sacramento, California 95814  
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## **SUMMARY OF PROGRAM CHANGES FOR THE 2002 – 2003 FISCAL YEAR**

This document serves as an addendum to the existing Lower-Emission School Bus Program Guidelines, which were approved by the Board on December 7, 2000, and issued in April 2001. Summarized below are the proposed changes, contained in this addendum, for the continuation of the program with 2002 – 2003 fiscal year funds provided through Proposition 40.

- ◆ Updated regional funding allocations based on \$4,290,000 available statewide in the 2002 – 2003 fiscal year for the purchase of “clean, safe, school buses.” No new funding is available for continuation of the retrofit program component applicable to in-use diesel school buses.
- ◆ The California Energy Commission (CEC) is to administer the program for school districts in more regions throughout California than in the two previous years of the program. Fewer regions will self-administer the program.
- ◆ Board-designated funding split for alternative-fuel school bus purchases and intermediate level diesel school bus purchases (i.e., two-thirds of funding for alternative-fuel school buses; one-third of funding for diesel school buses) to be maintained as statewide goal, with less emphasis on region-specific implementation.
- ◆ Minor changes to requirements for school districts to contribute funds toward the purchase of new school buses. These changes include a reduced school district funding contribution for the purchase of a new school bus that replaces an in-use pre-1977 model year school bus.
- ◆ Elimination of the requirement for air districts that self-administer the program to contribute match funding in the amount of ten percent of their respective state funding allocations.
- ◆ Updated eligibility criteria for funding new alternative-fuel and intermediate level diesel school buses with 2003 model-year engines.
- ◆ Updated program timetable with enforceable delivery deadline for program-funded school buses.
- ◆ Monetary penalty assessed on the business entity or entities responsible for a delay that results in the failure to deliver program-funded school buses to school districts by the program delivery deadline.
- ◆ Program expenditures, at both the local and state level, subject to audit by Office of State Audits and Evaluations, Department of Finance.

## **THE LOWER-EMISSION SCHOOL BUS PROGRAM DRAFT GUIDELINE REVISIONS**

This document serves as an addendum to the existing Lower-Emission School Bus Guidelines (Guidelines), which were approved by the Board on December 7, 2000, and issued in April 2001. The existing guidelines are available from our web site at:  
<http://www.arb.ca.gov/msprog/schoolbus/schoolbus.htm>.

The purpose of this addendum is to update eligibility criteria for the purchase of new, lower-emitting school buses throughout California, to update funding allocations for participating regions, to incorporate provisions required by Proposition 40, and to incorporate other, minor administrative changes. The changes in this document are only applicable to the new school bus purchase component of the existing Lower-Emission School Bus Program. Proposition 40 and subsequent legislation (Assembly Bill 425; Statutes of 2002, Chapter 379) did not provide additional funds for the continuation of the particulate matter (PM) retrofit program component applicable to in-use diesel school buses.

### **I. BACKGROUND**

#### **A. Purpose of the Program**

The Air Resources Board's (ARB) mission is to provide clean, healthful air to all residents of California, and to protect those most vulnerable to the harmful effects of air pollution. The ARB advanced this mission through the adoption of the Lower-Emission School Bus Program in December 2000. As approved by the Board, this incentive program was designed to reduce school children's exposure to both toxic PM emissions and smog-forming oxides of nitrogen (NOx) emissions through two program components: 1) a school bus purchase and infrastructure component to replace the oldest, highest-polluting buses with new, lower-emitting buses meeting the latest federal motor vehicle safety standards; and 2) a retrofit component to significantly reduce PM emissions from the in-use diesel school bus fleet.

With a funding allocation from Proposition 40 funds, the Lower-Emission School Bus Program will continue to benefit school children's health through the purchase of safe, new lower-emitting school buses.

## **B. Existing Funding for the Lower-Emission School Bus Program (2000-2001 and 2001-2002 Fiscal Years)**

For the past two years, the ARB, in conjunction with the California Energy Commission (CEC), has administered the Lower-Emission School Bus Program. Through the state budget process, Governor Gray Davis allocated a total of \$66 million for the implementation of this program. Of this total funding amount, \$49.5 million has been dedicated to the purchase of safe, lower-emitting new school buses throughout the 2000-2001 and 2001-2002 fiscal years. The remaining \$16.5 million has been dedicated to the purchase and installation of exhaust aftertreatment devices to reduce PM emissions from in-use diesel school buses.

The ARB, the CEC, and the local air quality management and air pollution control districts have administered and implemented the program using the Lower-Emission School Bus Guidelines approved by our Board on December 7, 2000. The CEC has been responsible for direct implementation of the program component to replace old school buses with new, low-emitting models in many areas of the state; six air districts sought and received authorization to directly implement the program in their respective regions. For the in-use diesel bus retrofit component of the program, participating air districts are responsible for its direct implementation. This program component is on-going and is not scheduled for completion until September 2003. The ARB is responsible for general program oversight and administration for both components of the Lower-Emission School Bus Program, and will continue in this role for expenditure of the funding provided through Proposition 40.

### **Status of New Bus Purchases**

The Board's approval of the Guidelines in December 2000 included designated funding levels for the purchase of both new alternative-fuel school buses and new diesel school buses with exhaust aftertreatment requiring the use of low-sulfur diesel fuel (referred to as intermediate level diesel technology). The Board directed that two-thirds of the new bus purchase funds be used for new alternative-fuel school bus and infrastructure purchases, and that one-third of the new bus purchase funds be used for new intermediate level diesel school bus purchases.

Tables 1 and 2 below show, by region, the state funds allocated for new bus purchases to replace older, higher-emitting models and the number of new school buses purchased with those funds. The Guidelines required that air districts administering the program in their respective regions provide match funding in the amount of at least 10 percent of their state funding allocations. Where applicable, Tables 1 and 2 include air districts' match funding amounts.

The information provided in these tables is based on preliminary reports by participating air districts and the CEC.

**TABLE 1**

1 <sup>st</sup> Year of Lower-Emission School Bus Program: New Bus Purchases (2000 – 2001 Fiscal Year)				
Region	State Funds	Air District Match Funds	# of New Bus Purchases	
			Alternative Fuel	Low-Sulfur Diesel
Self-Administered Program				
Bay Area AQMD	\$7,180,000	\$2,000,000	59	26
Monterey Bay Unified APCD	\$750,000	\$155,000	4	4
Sacramento Metropolitan AQMD	\$1,290,000	\$129,000	8	6
San Diego County APCD	\$3,110,000	\$311,000	19	13
South Coast AQMD	\$16,250,000	\$1,660,000	102	67
Ventura County APCD	\$810,000	\$108,825	6	3
CEC-Administered Program				
Antelope Valley APCD	\$360,000	N/A	3	1
Mojave Desert AQMD	\$430,000	N/A	2	0
San Joaquin Valley APCD	\$3,400,000	N/A	21	12
Santa Barbara County APCD	\$440,000	N/A	2	1
CEC Pool – all other air districts	\$2,730,000	N/A	12	12
ARB & CEC Administration	\$750,000			
<b>TOTAL</b>	<b>\$37,500,000</b>	<b>\$4,363,825</b>	<b>238</b>	<b>145</b>

Note: N/A = not applicable; these air districts were not required to provide match funding

**TABLE 2**

2 <sup>nd</sup> Year of Lower-Emission School Bus Program: New Bus Purchases (2001 – 2002 Fiscal Year)				
Region	State Funds	Air District Match Funds	# of New Bus Purchases	
			Alternative Fuel	Low-Sulfur Diesel
Self-Administered Program				
Bay Area AQMD	\$2,340,000	\$1,920,000	29	11
Monterey Bay Unified APCD	\$250,000	\$76,964	2	1
Sacramento Metropolitan AQMD	\$410,000	\$58,675	4	2
San Diego County APCD <sup>1</sup>	\$1,020,000	\$102,000	6	8
South Coast AQMD	\$5,310,000	\$1,531,000	39	20
Ventura County APCD	\$260,000	\$37,615	2	1
CEC-Administered Program				
Antelope Valley APCD	\$120,000	N/A	1	0
Mojave Desert AQMD	\$140,000	N/A	2	0
San Joaquin Valley APCD	\$1,110,000	N/A	7	5
Santa Barbara County APCD	\$150,000	N/A	2	0
CEC Pool – all other air districts	\$890,000	N/A	5	3
ARB & CEC Administration <sup>2</sup>	\$0			
TOTAL	\$12,000,000	\$3,726,254	99	51

Notes: N/A = not applicable; these air districts were not required to provide local match funding.

<sup>1</sup>San Diego County APCD augmented the program with \$5,172,674 from mitigation fees and funded an additional 21 alternative-fuel buses and an additional 28 intermediate level diesel buses.

<sup>2</sup>ARB and CEC did not receive administration money for the 2001 – 2002 fiscal year.

#### Status of In-Use Diesel School Bus Retrofits

The in-use diesel school bus retrofit component of the program is on-going and is scheduled for completion in September of 2003. The retrofit component was allocated a total of \$16.5 million during the 2000 – 2001 and 2001 – 2002 fiscal years to equip in-use diesel school buses with ARB-verified retrofit devices that reduce toxic PM emissions. Thirteen air districts throughout California are



participating in this program component. By September 2003, the ARB staff expects that about 1,500 in-use diesel school buses will have been retrofitted with catalyzed diesel particulate filters requiring the use of low-sulfur diesel fuel that reduce PM emissions by 85 percent, and about another 1,500 will have been retrofitted with diesel oxidation catalysts that reduce PM emissions by 25 percent.

**C. New Funding for the Lower-Emission School Bus Program  
(2002-2003 and 2003-2004 Fiscal Years)**

Proposition 40, the voter-approved initiative to conserve natural resources and improve state and local parks, provides funding for new school bus purchases through Assembly Bill 425 (Statutes of 2002, Chapter 379). Assembly Bill 425 directs that 20 percent of the Proposition 40 funds made available to the ARB shall be allocated for the acquisition of “clean, safe, school buses for use in California’s public schools that serve pupils in kindergarten and grades 1 to 12, inclusive.” For the 2002 – 2003 fiscal year, this means that \$4,920,000 is available for the purchase of new safe, lower-emitting school buses -- about 45 buses statewide. In the 2003 – 2004 fiscal year, the Lower-Emission School Bus Program is expected to receive an additional 20 percent of the \$23 million in Proposition 40 funds earmarked for the ARB.

**II. FUNDING ISSUES**

**A. Proposed Funding Allocations**

The funding allocation methodology used for the Lower-Emission School Bus Program during the 2000 - 2001 and 2001 - 2002 fiscal years was based on population. The ARB staff recommends continuing the use of this methodology for the distribution of this year’s funds. Allocating the funds in this manner provides for the placement of new, low-emitting buses in more densely populated urban areas and will thus reduce exposure to toxic diesel particulates for the greatest number of people.

Table 3 below shows the proposed distinct air district funding allocations for school districts in seven regions throughout California. The ARB staff is proposing that air districts receiving funding allocations for the purchase of more than one new school bus be permitted to administer the program for school districts in their respective regions. The staff proposes that the CEC administer the program for school districts in all other regions. This proposal would allow the following five air districts to administer their own programs: the Bay Area Air Quality Management District (BAAQMD), the Sacramento Metropolitan Air Quality Management District (SMAQMD), the San Diego County Air Pollution Control District (SDAPCD), the San Joaquin Valley Air Pollution Control District (SJVAPCD), and the South Coast Air Quality Management District (SCAQMD). It is the staff’s understanding, however, that only the BAAQMD, the SCAQMD,

and the SMAQMD are interested in continuing with direct program administration, therefore, Table 3 reflects that only these three air districts will continue to self-administer the program.

Compared with the previous two years of the program, air districts will be receiving significantly less grant funds for the purchase of new school buses. Although the funding allocations have decreased, the administrative and auditing requirements as a result of Proposition 40 may increase for those air districts that self-administer the program. Therefore, the staff believes it is appropriate to focus program administration at the CEC and the larger air districts.

**TABLE 3**

<b>Proposed Funding Allocations (2002 – 2003 FY)</b>		
<b>Region</b>	<b>Funds</b>	<b>Approximate # of Buses</b>
<b>Self-Administered Program</b>		
Bay Area AQMD	\$960,000	9
Sacramento Metropolitan AQMD	\$170,000	1-2
South Coast AQMD	\$2,175,000	20
<b>CEC-Administered Program</b>		
Monterey Bay APCD	\$106,000	1
San Diego County APCD	\$415,000	4
San Joaquin APCD	\$455,000	4-5
Ventura County APCD	\$110,000	1
CEC Pool – all other air districts	\$529,000	5
<b>TOTAL</b>	<b>\$4,920,000</b>	<b>45 - 47</b>

#### **B. Funding Split between Alternative-Fuel and Diesel School Buses**

With the adoption of the Lower-Emission School Bus Program Guidelines in December 2000, the Board designated two-thirds of the new bus purchase funding for alternative-fuel school buses and one-third of the funding for intermediate level diesel school buses. The Board's intent was for this policy to be implemented on a regional basis; therefore, air districts with distinct funding allocations were required to award funds consistent with the designated funding split, to the extent possible. In administering the program for other regions in California, the CEC was also to award funds consistent with the Board's designated funding split.

For this year's funding allocation provided through Proposition 40, the ARB staff recommends maintaining the designated funding split as a statewide goal, but with less emphasis on region-specific implementation. Due to the small pot of funding available this year, it is impractical for many air districts to maintain this funding policy in their respective regions. The staff's proposal provides school districts with the flexibility to purchase either intermediate level diesel or

alternative-fuel school buses, but does not constrain new bus purchases to a particular fuel type as a result of decreased funding allocations. Based on purchase practices for the past two years of the program, the ARB staff believes the mix of new buses purchased statewide with program funds will be relatively consistent with the Board's original direction.

### **C. School District Funding Contributions**

The ARB staff is proposing minor changes to the requirements for school districts' financial contributions for new buses funded through the Lower-Emission School Bus Program. The staff's new proposal bases the funding amount for each new bus purchase on the model year of the bus being replaced, and reduces the school districts' financial contribution for the replacement of each pre-1977 model year bus. Specifically, the staff proposes that:

- The state will pay a minimum of 85 percent of the total cost of a new school bus (including taxes and applicable State Department of General Service fees) that replaces an in-use pre-1977 model year school bus, with a priority on replacing diesel school buses. The school districts' financial contribution will be capped at \$10,000 per each new bus purchased. Other grant funds, such as air district funds (e.g., motor vehicle registration fee monies) can be used as a source of the required school district funds. To maximize state funds, Carl Moyer Program funds cannot be used as a source of the required school district funds.
- The state will pay a minimum of 75 percent of the total cost of a new school bus (including taxes and applicable State Department of General Services fees) that replaces an in-use 1977 through 1986 model year school bus, with a priority on replacing diesel school buses. The school districts' financial contributions will be capped at \$25,000 per each new bus purchased. Again, other grant funds, such as air district funds (e.g., motor vehicle registration fee monies) can be used as a source of the required school district funds. To maximize state funds, Carl Moyer Program funds cannot be used as a source of the required school district funds.

In revising the amount that some school districts will contribute to each new bus purchase, the ARB staff is acknowledging that the state's current budget situation may impact schools' abilities to participate in the Lower-Emission School Bus Program. Schools already lack sufficient funding from general funds for non-mandated services, such as school transportation; limited transportation funding may further dwindle as school districts' budgets are cutback and re-prioritized.

With the limited funding available through Proposition 40, the staff's proposal now focuses funding in those school districts with the oldest buses (and thus most impacted by the cost of transportation services), yet retains the concept of program "buy-in" for school districts. The ARB staff believes that some form of

program “buy-in” is necessary to maximize program benefits. It provides for the purchase of more new buses statewide, which means health and safety benefits for more people, and it ensures that school districts and/or air districts have a vested interest in adhering to program requirements.

It is important to point out that while this proposal retains the same percentages of state funding for each new bus purchased as in the existing Lower-Emission School Bus Program Guidelines, in practice, the state may be funding more than the minimum 75 percent or 85 percent of a new bus purchase. Under the existing Lower-Emission School Bus Program, the state also paid more than the minimum state funding percentages in some cases. For example, if the total purchase price of a new compressed natural gas (CNG) bus is \$132,000, including applicable taxes and fees, and the school district contributes \$25,000, the state is actually paying over 80 percent (\$107,000) of the new bus total purchase price. If the school district qualifies for a reduced financial contribution based on the staff’s new proposal, the state would pay for an even higher percentage of the new bus total purchase cost.

#### **D. Air District Funding Contributions**

Air districts that administered their own Lower-Emission School Bus Programs using 2000 - 2001 and 2001 - 2002 fiscal year funds were required to contribute match funding in the amount of 10 percent of their state grant awards for new bus purchases. This match funding requirement was not a legislative requirement, but a requirement of the Guidelines. For the 2002 - 2003 fiscal year funds allocated from Proposition 40, the ARB staff is proposing to eliminate the match funding requirement for the three air districts (BAAQMD, SCAQMD, and SMAQMD) that have requested to continue administration of their own programs. Assembly Bill 425 specifically excludes air districts participating in the Lower-Emission School Bus Program from match funding requirements specified in Health and Safety Code section 44287. While the staff’s proposal does not require match funding from air districts administering their own programs, it does not prohibit any air district from providing match funding to augment its state funding allocation if it so chooses.

#### **E. Environmental Justice Requirements**

Proposition 40 requires that funds appropriated to the ARB be used in a manner consistent with the environmental justice provisions of Assembly Bill 1390 (Chapter 732, Statutes of 2001). These provisions (contained in Health and Safety Code section 43023.5) require air districts with populations of one million residents or more to distribute one-half of their respective funding allocations to directly benefit low-income communities and communities of color that are disproportionately impacted by air pollution. The 2001 - 2002 fiscal year funds for new bus purchases within the existing Lower-Emission School Bus Program

were subject to environmental justice provisions of AB 1390; therefore, this is not a new requirement as a result of Proposition 40.

Based on Health and Safety Code section 43023.5, five air districts are subject to the environmental justice provisions. They are: the South Coast Air Quality Management District, the Bay Area Air Quality Management District, the San Joaquin Valley Air Pollution Control District, the San Diego County Air Pollution Control District, and the Sacramento Metropolitan Air Quality Management District. All other air districts are encouraged to allocate their respective funds in a similar manner, to the extent possible.

The ARB staff proposes that air districts continue implementing the environmental justice requirements using the same ARB-recommended criteria developed for the expenditure of the 2001 - 2002 fiscal year funds. This criteria uses the percentage of students within a public school district participating in the state's free and reduced-lunch meal program to assist in identifying a region in which to target funds. Alternatively, air districts may develop and use different criteria, if approved by the ARB. The ARB staff will continue to work with air districts and the CEC, as needed, to assist in meeting the requirements of Health and Safety Code section 43023.5.

### **III. PROPOSED UPDATED CRITERIA FOR FUNDING NEW SCHOOL BUSES WITH LOW-EMITTING ENGINES**

The existing Lower-Emission School Bus Program Guidelines provide the eligibility criteria for funding new school buses with low-emitting engines. In general, the existing Guidelines require new school buses purchased with program funds to emit less toxic PM emissions and smog-forming NOx emissions than allowed by current emission standards. Due to the introduction of new emission requirements in October 2002, it is now necessary to update the eligibility criteria for funding new school bus purchases.

This section summarizes the existing guideline requirements and provides the ARB staff's proposal for updated eligibility criteria for funding new school buses with lower-emitting engines produced after October 1, 2002, and through the 2003 model year.

Based on the current status of alternative-fuel and diesel engine technology, the ARB staff is proposing new eligibility criteria that do not require engines in program-funded school buses to meet reduced-emission NOx levels. However, the engines must meet reduced-emission PM levels. The staff will be assessing the status of engine technology prior to the introduction of 2004 model year engines with the intent of reinstating the requirement that engines in program-funded school buses achieve reduced-emission NOx levels. The ARB staff believes the proposed updated eligibility criteria is responsive to school districts'

transportation needs and achieves the program's goal to provide clean, safe school buses for California's school children.

#### **A. Existing Criteria for Funding New School Buses**

Under the existing guidelines, the ARB funded school buses with alternative-fuel engines and intermediate level diesel engines. The Board approved this policy to provide school districts with the flexibility to choose the fuel type most advantageous to their fleet operations. New school buses eligible for funding under the existing program met either of the following requirements:

Option 1: The ARB funded the purchase of new school buses with heavy-duty alternative-fuel engines certified to one of the ARB's optional, reduced-emission NOx standards starting at 2.5 grams per brake horsepower-hour (g/bhp-hr) NOx and at a PM level of 0.03 g/bhp-hr or less. Two engine manufacturers, Cummins and John Deere, produced alternative-fuel engines for school buses funded through the existing program.

Option 2: The ARB funded the purchase of new school buses with heavy-duty diesel engines certified to intermediate emission levels through the state engine family emission limit (FEL) process. These diesel engines were required to certify to a 3.0 g/bhp-hr NOx FEL and to a 0.01 g/bhp-hr or lower PM FEL. Two engine manufacturers, International and Caterpillar, produced intermediate level diesel engines for school buses funded through the existing program. These engines were equipped with catalyzed diesel particulate filters and required the use of low-sulfur diesel fuel (diesel fuel with a sulfur content of no greater than 15 parts per million by weight).

#### **B. Proposed Criteria for Funding New School Buses**

The ARB staff is proposing to fund new school buses with 2003 model year heavy-duty engines that meet their legally-required NOx limits, that have PM certification emission levels below the current 0.10 g/bhp-hr PM emission standard (criteria for reduced-emission PM levels are discussed below), and that are delivered to school districts by the delivery deadline of September 1, 2004. The original guideline requirements for the disposition of each old school bus replaced with a new bus purchased with program funds remain in force.

##### Proposed Emission Standard Criteria

The staff's proposal maintains the Board's original policy decision to provide the flexibility for alternative-fuel and intermediate level diesel purchases, while recognizing that not all engine manufacturers participating in the Lower-Emission School Bus Program are subject to the October 1, 2002, "pull-ahead" NOx plus non-methane hydrocarbons (NMHC) emission standard. The "pull-ahead" standard, a provision of the federal Consent Decrees/California-specific

Settlement Agreements, requires the majority of on-road heavy-duty engine manufacturers to produce engines meeting a NOx plus NMHC standard of 2.4 g/bhp-hr, or 2.5 g/bhp-hr with a 0.5 g/bhp-hr cap on NMHC, starting on October 1, 2002 – over one year ahead of when originally required by the United States Environmental Protection Agency and the ARB.

Based on the proposed emission standard criteria, the engine manufacturers currently participating in the Lower-Emission School Bus Program, and their expected product lines for the 2003 model year, new school buses with heavy-duty engines from the following engine manufacturers would be eligible for funding from 2002 – 2003 fiscal year funds:

**John Deere:** John Deere supplies the majority of CNG engines for school buses in California. It is not subject to the Consent Decrees/Settlement Agreements and therefore is not required to meet the NOx plus NMHC “pull-ahead” standard, which became effective on October 1, 2002. Legally, John Deere can produce engines certified to a 4.0 g/bhp-hr NOx emission standard through the 2003 model year. In practice, however, John Deere would continue to produce CNG engines certified to at least 2.5 g/bhp-hr NOx for participation in the Lower-Emission School Bus Program. The staff’s proposal would continue to allow school buses powered by John Deere engines certified to a 2.5 g/bhp-hr NOx emission standard or lower and certified at a reduced PM emission level of 0.03 g/bhp-hr or lower to be eligible for funding.

**Cummins:** Cummins also supplies CNG engines for school buses, although its engines are not in common use in school buses in California. Cummins engines, CNG and diesel, are subject to the October 2002 “pull-ahead” standard of 2.5 g/bhp-hr NOx plus NMHC. The staff’s proposal would allow school buses powered by Cummins CNG engines certified to a 2.5 g/bhp-hr NOx plus NMHC standard (or lower) and certified to a reduced PM emission level of 0.03 g/bhp-hr or lower to be eligible for funding. Of note, Cummins has already certified a 2003 model year engine to a 1.8 g/bhp-hr optional, reduced-emission NOx +NMHC standard and to 0.03 g/bhp-hr optional, reduced-emission PM standard.

**International (Navistar):** International is participating in the existing Lower-Emission School Bus Program with its intermediate level diesel engine certified to an FEL of 3.0 g/bhp-hr NOx and 0.01 g/bhp-hr PM. Under its provisions of the Consent Decrees/Settlement Agreements, International can legally produce 3.1 g/bhp-hr NOx engines through the 2003 model year. The staff’s proposal would continue to allow school buses powered by these International engines, which certify just under International’s legally-required NOx limit and to a 0.01 g/bhp-hr PM FEL, to be eligible for funding.

Under the staff’s proposal, school buses powered by Caterpillar’s intermediate level diesel engine would not be eligible for funding. Unlike International,

Caterpillar is subject to the “pull-ahead” provision of the Consent Decrees/Settlement Agreements and was required to meet the NOx plus NMHC “pull-ahead” standard starting on October 1, 2002. At the time of this writing, Caterpillar was unable to meet the emission requirements of the “pull-ahead” standard and is paying a per-engine non-conformance penalty (NCP) that will allow it to continue to sell its higher-emitting engines. As a matter of policy, the staff believes that any engine that uses NCPs as its method of compliance with Consent Decree/Settlement Agreement requirements should be ineligible for grant funding.

While not specifically mentioned above, the staff’s proposal would also allow funding for new school buses with heavy-duty diesel engines certified to the NOx plus NMHC “pull-ahead” standard (or lower) and to a reduced-emission PM level of 0.01 g/bhp-hr. To date, no engine manufacturer has certified a diesel engine for use in school buses to both the “pull-ahead” standard and to a reduced-emission PM level.

Proposed Timeline for the Lower-Emission School Bus Program  
(2002 – 2003 FY)

Table 4 below presents an overview of the timeline for the Lower-Emission School Bus Program for expenditure of the 2002 - 2003 fiscal year funds. Dates shown are the final dates for the execution of the designated activities. In addition to meeting the emission standard criteria discussed above, the staff is proposing that all school buses purchased with funding from the Lower-Emission School Bus Program must be delivered to school districts by the delivery deadline specified in Table 4. The delivery deadline must be included in the contract language in which the public agency (either the CEC or the local air districts that self-administer the program) awards program funds to school districts and in the purchase order agreement between school districts and school bus distributors. The failure to meet this delivery deadline will result in a monetary penalty assessed against the business entity (e.g., engine manufacturer, school bus manufacturer, or school bus distributor) responsible for the delivery delay. The delivery delay penalty is discussed further in Section IV of this addendum.

**TABLE 4**

<b>Lower-Emission School Bus Program Timeline for 2002 – 2003 FY Funds</b>	
March 27, 2003	ARB Board acts on Updated Guideline Proposal
May 15, 2003	ARB disburses funds to air districts/CEC
June 30, 2003	School districts’ application deadline for new buses
August 15, 2003	Buses ordered from distributors
September 1, 2004	All new buses delivered
November 1, 2004	Final reports due to ARB from air districts and CEC



### **C. Emission Benefits**

Because school buses remain in service for many years, some 20 years and longer, replacing old school buses with new, low-emitting models provides long-term public health benefits. Based on the funding allocation of \$4,920,000 for the 2002 – 2003 fiscal year, the ARB staff estimates that the Lower-Emission School Bus Program will reduce NOx emissions by approximately 6 tons and PM emissions by approximately 10 tons over the period from 2004 through 2019.

### **IV. PROPOSED PENALTY PROVISION FOR LATE DELIVERY OF SCHOOL BUSES**

The ARB staff is proposing a mechanism by which a monetary penalty is assessed against the business entity -- either the engine manufacturer, the school bus manufacturer, or the school bus distributor, or any combination of these entities -- responsible for a delay that results in the failure to deliver program-funded school buses to school districts by the specified delivery deadline of September 1, 2004. Specifically, the staff is proposing that air districts that self-administer the program, or the CEC, which will administer the program in many areas of the state, assess a penalty of \$100.00 per day delivered late for each bus delivered after the delivery deadline. The purpose of this penalty is to ensure a level playing field for all business entities that stand to profit from the purchase of program-funded school buses and to minimize any potential risks to school districts.

As mentioned in Section III, the ARB staff is proposing that the delivery deadline must be included in the contract language in which the public agency (either the CEC or the local air districts that self-administer the program) awards funds to school districts, and in the terms and conditions of the purchase order agreement between school districts and school bus distributors. In addition, each funding award contract and school bus purchase order agreement must contain the following statement:

“Either the local air district or the California Energy Commission, whichever public agency is responsible for program implementation in the region in which Lower-Emission School Bus Program grant funds are awarded, shall assess a penalty of \$100.00 per day per bus on the business entity or entities responsible for a delay that results in the failure to deliver school bus(es) purchased with funds from the Lower-Emission School Bus Program by the delivery deadline contained in this agreement.”

Any funds collected through the enforcement of this penalty provision will be used to augment program funding in the region in which the violation occurred for those air districts with distinct funding allocations. For violations that occur in school districts within air districts without distinct funding allocations, the funds

collected through the enforcement of this penalty will be used to augment program funding on a statewide basis.

## **V. APPLICATION AND AWARD PROCESS**

The staff is not proposing any changes to the school district application and award process currently used in the Lower-Emission School Bus Program. School districts located within the Bay Area Air Quality Management District, the South Coast Air Quality Management District, and the Sacramento Metropolitan Air Quality Management District shall submit applications directly to the applicable air district. School districts in all other air districts shall submit applications directly to the California Energy Commission. More information regarding the application process, including a sample application format, is contained in the Lower-Emission School Bus Guideline document approved by the Board on December 7, 2000. This document can be downloaded from the ARB's web site at: <http://www.arb.ca.gov/msprog/schoolbus/schoolbus.htm>.

## **VI. REPORTING AND AUDITING REQUIREMENTS**

The existing Lower-Emission School Bus Program is implemented in a manner to streamline reporting requirements for school districts and air districts. The staff is proposing to continue with the streamlined reporting process contained in the Lower-Emission School Bus Guideline document approved by the Board on December 7, 2000.

Because the funding for the continuation of the Lower-Emission School Bus Program now comes from a voter-approved initiative, expenditures from this source (i.e., Proposition 40) must be reported to the Legislature on an annual basis. As a result, the Office of State Audits and Evaluations within the Department of Finance will audit program administration at both the state and local levels, and report to the Legislature on its findings. Information provided by the ARB to the Office of State Audits and Evaluations will be based on information provided by those air districts that their own programs, and on information provided by the CEC, which will administer the program for participating school districts in the remaining areas of the state. Based on the proposed timeline presented earlier, final reports from the air districts and the CEC for the expenditure of 2002 - 2003 fiscal year funds will be due to the ARB by November 1, 2004.